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EXAMINER	
DUONG, FRANK	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/662,194	BENSON ET AL.	
	Examiner	**Art Unit**	
	Frank Duong	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _21 January 2005_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,3-11,13-17,19-42,44-52 and 54-97_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1,3-11,13-17,19-42,44-52 and 54-97_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to communication dated 1/21/05. Claims 1, 3-11, 13-17, 19-42, 44-52 and 54-97 are pending in the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-6, 42, 44-47 and 89 are rejected under 35 U.S.C. 102(e) as being anticipated by Siu (USP 6,246,687).

Regarding **claim 1**, in accordance with Siu reference entirety, Siu discloses a method of allocating bandwidth to data traffic flows for transfer through a network device (Figs. 1-3), comprising:

allocating bandwidth to a committed data traffic flow based on a guaranteed data transfer rate and a queue size of the committed data traffic flow in the network device (Fig. 3; block 303 and col.. 4, lines 46-59); and

allocating bandwidth to uncommitted data traffic flows using a weighted maximum/minimum process (*Fig. 3; block 301 and col. 4, lines 12-34 and Fig. 4 and col. 5, lines 5-65*), wherein the weighted maximum/minimum process allocates bandwidth to

the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow, and the weight corresponding to a delay and an average rate requirement for each uncommitted data traffic flow (*Fig. 4 and col. 5, lines 16-48, Siu discloses a weight Wi with initial value 0 is maintained for each VC, whose MCRi (minimum cell rate) is given. Siu also discusses a time period T is chosen such that MCRi*T>= 1. MCR and T are corresponding to "average rate requirement" and "a delay", respectively. Note: also refer to Algorithm 1, step Wj=Wj+(MCRi*T), wherein Sui discloses weigh assigned to each virtual circuit as a function of rate requirement MCR and a delay T*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Siu further discloses wherein the weighted bandwidth to the maximum/minimum process increase bandwidth to the uncommitted data traffic flows in accordance with the weights associated with the uncommitted data traffic flows until at least one of the uncommitted data traffic flows reaches a maximum bandwidth allocation (col. 5, lines 22-47).

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales discussed above), Siu further discloses wherein the maximum/minimum process allocates remaining bandwidth uncommitted data traffic flows based on weights associated with the remaining uncommitted data traffic flows (col.. 5, lines 36-48).

Regarding **claim 5**, in addition to features recited in base claim 1 (see rationales discussed above), Siu further discloses wherein the bandwidth comprises data cell slots (col. 3, lines 53 and thereinafter).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales discussed above), Siu further discloses wherein the bandwidth is allocated to the data traffic flows in discrete time intervals (col. 4, lines 9-10).

Regarding **claims 42, 44-47**, they call for an apparatus mirror claims 1, 3-6. Thus, they are rejected base on the same rationales discussed above.

Regarding **claim 89**, it calls for a computer program of method claim 1. Thus, it is rejected base on the same rationales discussed above.

3. Claims 7-11, 13-17, 19-41, 48-52 and 54-97 are rejected under 35 U.S.C. 102(e) as being anticipated by Hou et al (USP 6,515,965) (hereinafter "Hou").

Regarding **claim 7**, in accordance with Hou reference entirety, Hou discloses a method of allocating bandwidth (col. 3, Line 66; GMM rate allocation) to data flows (S1, S2 and S3) passing through a network device (Fig.2; 201, 202 or 203), each of the data flows having an associated weight, comprising:

increasing an amount of bandwidth to the data flows in proportion to the weights of the data flows until one port through the network device reaches a maximum value (PCR) (col. 5, Lines 23-31);

freezing the amounts of bandwidth allocated to the data flows in the one port (col. 5, Lines 34-44); and

increasing an amount bandwidth to all remaining data flows passing through the network device in proportion the weights of the remaining data flows (col. 5, Lines 45-53).

Regarding **claim 8**, in addition to features recited in base claim 7 (see rationales discussed above), Hou further discloses increasing the amount of bandwidth to the remaining data flows until another port through the network device reaches the network maximum value (Fig. 3; steps 305-307); freezing amounts of bandwidth allocated to the data flows the other port (Fig. 3; step 310); and increasing the amount of bandwidth to remaining data flows passing through the network device in proportion the weights of the remaining data flows (Fig. 3; step 304-307 and 309).

Regarding **claim 9**, in addition to features recited in base claim 7 (see rationales discussed above), Hou further discloses assigning one or more of the data flows a minimum bandwidth, wherein the amount of bandwidth allocated to the one or more data flows is increased relative to the minimum bandwidth (MCR) (col. 5, Lines 16-17).

Regarding **claim 10**, in addition to features recited in base claim 7 (see rationales discussed above), Hou further discloses wherein bandwidth is allocated to the data flows in discrete time intervals (col. 5, Line 25).

Regarding **claim 11**, in accordance with Siu reference entirety, Hou discloses a method of allocating bandwidth to data flows passing through a network device, comprising:

allocating a predetermined amount of bandwidth to one or more of the data flows (col. 5, Lines 16-33); and

distributing remaining bandwidth to remaining data flows using a weighted maximum/minimum process (GMM) (col. 5, Lines 34-53); wherein the weighted maximum/minimum process allocates bandwidth to the remaining data flows in

proportion to a weight associated with each remaining data flow, and the weight corresponding to a delay and an average rate requirement for each remaining data traffic flow (*GMM processing known in the art as weighted (rate) maximum/minimum process and at col. 5, lines 16-17, Hou discloses each session s is assigned a rate (weigh) equivalent to its corresponding minimum cell rate (MCRs) and sessions are sorted in order of increasing MCR to produce a list of session (corresponding to "a delay")*).

Regarding **claim 13**, in addition to features recited in base claim 11 (see rationales discussed above), Hou further discloses wherein the weighted maximum/minimum process comprises: increasing an amount of bandwidth to the remaining data flows proportion data flows until one to weights associated with the remaining port through the network device reaches a maximum value (PCR) (Fig. 3; steps 305-307).

Regarding **claim 14**, in addition to features recited in base claim 12 (see rationales discussed above), Hou further discloses wherein the weighted maximum/minimum process comprises:

freezing amounts of bandwidth allocated to the data flows in the one port (col. 5, Lines 34-44); and

increasing an amount bandwidth to still remaining data flows passing through the network device in proportion the weights of the remaining data flows (col. 5, Lines 45-53).

Regarding **claim 15**, in accordance with Hou reference entirety, Hou discloses a method of allocating bandwidth to data flows passing through a network device (Fig. 1; element 201, 202 or 203), comprising:

determining a character of the data flows, the character corresponding to a probability of the data flow in using the bandwidth (col. 4, lines 41-67); and

allocating bandwidth to the data flows accordance with the character of the data flows; wherein the bandwidth is allocated data flows according to which data flows have a highest probability of using the bandwidth (col. 5, Lines 11-57).

Regarding **claim 16**, in addition to features recited in base claim 15 (see rationales discussed above), Hou further discloses wherein the character of the data flows includes peak cell rate, likelihood of bursts, and/or average cell rate (col. 4, Lines 56-67).

Regarding **claim 17**, in accordance with Hou reference entirety, Hou discloses a method of allocating bandwidth to data flows passing through a network device (Fig. 1; element 201, 202 or 203), comprising: allocating the bandwidth using a weighted maximum/minimum process (col. 5, Lines 11-57), wherein the weighted maximum/minimum process allocates bandwidth to the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow, and the weight corresponding to a delay and an average rate requirement for each uncommitted data traffic flow (*GMM processing known in the art as weighted (rate) maximum/minimum process and at col. 5, lines 16-17, Hou discloses each session s is assigned a rate (weigh) equivalent to its corresponding minimum cell rate (MCRs) and*

sessions are sorted in order of increasing MCR to produce a list of session (corresponding to "a delay")).

Regarding **claim 19**, in addition to features recited in base claim 18 (see rationales discussed above), Hou further discloses wherein allocating the bandwidth according to the weights comprises: increasing an amount of bandwidth allocated to each data flow proportion to freezing an amount of bandwidth allocated to a data a weight assigned the data flow; and flow when either (i) an input port or an output port of the network device (see Figs. 8-9 for the connection of devices reaches a maximum utilization, or (ii) the data flow reaches a maximum bandwidth (PCR) (Fig.3; step 307) (col. 5, Lines 45-53).

Regarding **claim 20**, in addition to features recited in base claim 19 (see rationales discussed above), Hou further discloses further comprising: increasing an amount of bandwidth to remaining data flows passing through another input port or output port reaches a maximum utilization, the network device until either the network device one of the remaining data flows reaches a maximum bandwidth (PCR) (col. 5, lines 45-53); freezing (saturating) an amount of bandwidth allocated to the remaining data flow that has reached a maximum bandwidth (PCR) or the remaining data flow passing through an input or output port reached that has reached a maximum utilization (col. 5, Lines 34-.44); and increasing the amount of bandwidth to still remaining data flows passing through the network device in proportion to weights (MCRS) associated with the remaining data flows (col. 5, Lines 5, Lines 23-33).

Regarding **claim 21**, in addition to features recited in base claim 20 (see rationales discussed above), Hou further discloses wherein, after all of the data flows passing through the network device are frozen, the method further comprises: distributing remaining bandwidth at an output port to data flows passing through the output port (col. 5, Lines 39-42).

Regarding **claim 22**, in addition to features recited in base claim 20 (see rationales discussed above), Hou further discloses wherein after all of the data flows passing through the network device are frozen, method further comprises: distributing remaining bandwidth at an output pod to in proportion to data flows passing weights (MCRs) of the data through the output port flows passing through the output pod (col. 5, lines 39-42).

Regarding **claim 23**, in addition to features recited in base claim 20 (see rationales discussed above), Hou further discloses wherein, after all of the data flows passing through network device are frozen, the method further comprises: distributing remaining bandwidth at an output pod to data flows passing through the output-port according to which data flows have a highest probability of using the bandwidth (col. 5, lines 17-33).

Regarding **claim 24**, in addition to features recited in base claim 17 (see rationales discussed above), Hou further discloses wherein the bandwidth is allocated in discrete time intervals (col. 5, Line 25).

Regarding **claim 25**, in accordance with Hou reference entirety, Hou discloses a method of allocating bandwidth to data flows (col. 4, Lines 25-26; sessions associated

with S1-S3) through a network device (Fig. 2; 201, 202 or 203), comprising: allocating bandwidth to the data flows using a weighted max/min process wherein the weighted maximum/minimum process allocates bandwidth to the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow, and the weight corresponding to a delay and an average rate requirement for each uncommitted data traffic flow (*GMM processing known in the art as weighted (rate) maximum/minimum process and at col. 5, lines 16-17, Hou discloses each session s is assigned a rate (weigh) equivalent to its corresponding minimum cell rate (MCRs) and sessions are sorted in order of increasing MCR to produce a list of session (corresponding to "a delay"));* wherein an amount of bandwidth allocated data flows passing through an input pod the network device is greater than an amount of data that can pass through the input port of the network device (col. 4, 41-67).

Regarding **claim 26**, in accordance with Hou reference entirety, Hou discloses a method of allocating bandwidth to data flows (col. 4, Lines 25-26; sessions associated with S1-S3) through a network device (Fig. 2; 201, 202 or 203), comprising: allocating bandwidth to the data flows passing through input pods of the network device (see Figs. 8-9 for the connection of devices) using a weighted max/min process, wherein the weighted maximum/minimum process allocates bandwidth to the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow, and the weight corresponding to a delay and an average rate requirement for each uncommitted data traffic flow (*GMM processing known in the art as weighted (rate) maximum/minimum process and at col. 5, lines 16-17, Hou discloses each session s is*

assigned a rate (weigh) equivalent to its corresponding minimum cell rate (MCRs) and sessions are sorted in order of increasing MCR to produce a list of session (corresponding to "a delay")).

Regarding **claim 27**, in addition to features recited in base claim 26 (see rationales discussed above), Hou further discloses wherein allocating the bandwidth according to the weights comprises: increasing bandwidth allocating to data flows passing through each input port in proportion to a weight assigned to the data flow passing through the input port (col. 5, Lines 23-33); and freezing an amount of bandwidth allocated to a data flow passing through an input pod when either (i) the input port reaches a maximum utilization or (ii) the data flow reaches a maximum bandwidth (PCR) (Fig.3; step 307) (col. 5, Lines 45-53).

Regarding **claim 28**, in addition to features recited in base claim 27 (see rationales discussed above), Hou further discloses continuing to increase the bandwidth allocated to non-frozen data flows in proportion to weights of the data flows until an amount of bandwidth is frozen at all of the data flows (col. 5, Lines 34-42).

Regarding **claim 29**, in accordance with Hou reference entirety, Hou discloses a method of allocating bandwidth to data flows (col. 4, Lines 25-26; sessions associated with S1-S3) through a network device (Fig. 2; 201, 202 or 203), comprising: allocating bandwidth to the data flows passing through output ports of the network device (see Figs. 8-9 for the connection of devices) using a weighted max/min process, wherein the weighted maximum/minimum process allocates bandwidth to the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow,

and the weight corresponding to a delay and an average rate requirement for each uncommitted data traffic flow (*GMM processing known in the art as weighted (rate) maximum/minimum process and at col. 5, lines 16-17, Hou discloses each session s is assigned a rate (weigh) equivalent to its corresponding minimum cell rate (MCRs) and sessions are sorted in order of increasing MCR to produce a list of session (corresponding to "a delay")*).

Regarding **claim 30**, in addition to features recited in base claim 29 (see rationales discussed above), Hou further discloses wherein allocating the bandwidth according to the weights comprises: increasing bandwidth allocating to data flows passing through each output port in proportion to a weight assigned to the data flow passing through the output port; and freezing an amount of bandwidth allocated to a data flow passing through an output port when either (i) the output port reaches a maximum utilization or (ii) the data flow reaches a maximum bandwidth (PCR) (Fig.3; step 307) (col. 5, Lines 45-53).

Regarding **claim 31**, in addition to features recited in base claim 30 (see rationales discussed above), Hou further discloses continuing to increase the amount of bandwidth allocated to non-frozen data flows proportion to weights of the data flows until the amount of bandwidth allocated to data flows is frozen (col. 5, Lines 40-42).

Regarding **claim 32**, in addition to features recited in base claim 31 (see rationales discloses above), Hou further discloses wherein maximum values assigned to each data flow are based on the bandwidth allocations (col. 4, Line 39 and col. 5, lines 45-54).

Regarding **claim 33**, in addition to features recited in base claim 31 (see rationales discussed above), Hou further discloses wherein, after the amount of bandwidth assigned to all output ports frozen, the method further comprises: distributing remaining bandwidth at an output port to data flows passing through the output port (col. 5, Lines 51-54).

Regarding **claim 34**, in addition to features recited in base claim 30 (see rationales discloses above), Hou further discloses wherein, after the amount of bandwidth assigned to all output ports is frozen, the method further comprises: distributing remaining bandwidth at an output port to data flows passing through the output port proportion to weights of the data flows (col. 5, Lines 34-54).

Regarding **claim 35**, in addition to features recited in base claim 30 (see rationales discussed above), Hou further discloses wherein after of the data flows passing through the network device are frozen, the method further comprises: distributing remaining bandwidth at an output pod to data flows passing through the output port according to which data flows have a highest probability of using the bandwidth (col. 5, lines 34-35).

Regarding **claim 36**, in addition to features recited in base claim 26 (see rationales discussed above), Hou further discloses wherein the bandwidth is allocated in discrete time intervals (col. 5, Line 25).

Regarding **claim 37**, in addition to features recited in base claim 26 (see rationales discussed above), Hou further discloses allocating bandwidth to committed

data traffic based on a guaranteed data transfer rate (MCR and PCR) (col. 4, lines 64-67).

Regarding **claim 38**, in addition to features recited in base claim 37 (see rationales discussed above), Hou further discloses wherein bandwidth is allocated to the committed data traffic in response a request for bandwidth such that any request that is less than equal to the guaranteed data transfer rate (MCR) is granted (col. 5, lines 1-54).

Regarding **claim 39**, in addition to features recited in base claim 26 (see rationales discussed above), Hou further discloses wherein: the bandwidth is allocated to uncommitted data traffic and, for committed data frame, bandwidth is allocated based on a guaranteed transfer rate; and remaining bandwidth, allocated to the committed data frame, allocated to the uncommitted data traffic (col. 5, lines 1-54).

Regarding **claim 40**, in addition to features recited in base claim 19 (see rationales discussed above), Hou further discloses allocating a predetermined amount of bandwidth to one or more of the data flows; and distributing remaining bandwidth to non-frozen remaining data flows by: increasing an amount of bandwidth allocated to each remaining data flow in proportion to a weight assigned to the remaining data flow; and freezing the amount of bandwidth allocated to a remaining data flow when either an input pod or an output port of the network device reaches a maximum utilization, or the remaining data flow reaches a maximum bandwidth (col. 5, lines 1-54).

Regarding **claim 41**, in addition to features recited in base claim 37 (see rationales discussed above), Hou further discloses wherein bandwidth is allocated to

the committed data traffic in response to a request for bandwidth such that any request that is greater than the guaranteed data transfer rate is granted at the guaranteed rate (col. 4, lines 64-67 and col. 5, lines 1-54).

Claims 48-52, 54-82 and 97 call for an apparatus mirror claims 7-11, 13-17 and 19-41. They are rejected by the same rationales as discussed above.

Regarding **claim 83**, in accordance with Hou reference entirety, Hou discloses a method of transferring data traffic flows through a network device, comprising transferring a committed data traffic flow through the network device using a guaranteed bandwidth (col. 5, lines 1-21); determining an amount bandwidth that was used during previous data traffic flow transfer (col. 5, lines 26-28); and allocating bandwidth in the network device to uncommitted data traffic flows based on the amount of bandwidth that was used during the previous data traffic flow transfer (col. 5, lines 34-54).

Regarding **claim 84**, in addition to features recited in base claim 83 (see rationales discussed above), Hou further discloses wherein allocating comprises: determining a difference between the amount of bandwidth that was used during the previous data traffic flow transfer and an amount of available bandwidth (col. 5, lines 26-28); and allocating the difference in bandwidth the uncommitted data traffic flows (col. 5, lines 34-54).

Claims 85-88 call for an apparatus of claim 83-84. They are rejected by the same rationales as discussed above.

Claims 90-96 call for computer programs of claims 7, 11, 15, 17, 25, 26 and 29, respectively. They are rejected by the same rationales pertaining claims 7, 11, 15, 17, 25, 26 and 29 discussed above.

Response to Arguments

4. Applicant's arguments filed 1/21/05 have been fully considered but they are not persuasive.

In the Remarks of an outstanding response, on pages 33-44, pertaining the rejection of claims 1, 42, 89 under 35 U.S.C. § 102(e) of as being anticipated by Siu patent, Applicants alleges "*Siu does not teach a weighted maximum/minimum process that allocates bandwidth to the uncommitted data traffic flows in proportion to a weight associated with each uncommitted data traffic flow, where the weight corresponding to a delay and an average rate requirement for each uncommitted data traffic flow*".

In response Examiner respectfully disagrees and asserts, as clearly pointed out in the Office Action, *in reference to Fig. 4 and col. 5, lines 16-48, Siu discloses a weight Wi with initial value 0 is maintained for each VC, whose MCRi (minimum cell rate) is given. Siu also discusses a time period T is chosen such that MCRi*T>= 1. MCR and T are corresponding to "average rate requirement" and "a delay", respectively. Note: also refer to Algorithm 1, step Wj=Wj+(MCRi*T), wherein Sui discloses weigh assigned to each virtual circuit as a function of rate requirement MCR and a delay T.* Thus, contradistinction to Applicants' allegation, Sui does indeed teach the claimed limitations in a manner as recited.

Pertaining the rejection of claim 7 under 35 U.S.C. § 102(e) of as being anticipated by Hou patent, Applicants brought up the following arguments:

"Hou does not teach "each of the data flows having an associated weight".

Examiner agrees the word "weight" is not used in Hou reference. Hou, instead, uses the word "rate". At col. 5, lines 16-17, Hou clearly discloses *"each session (flow) s is assigned a rate (weight) equivalent to its corresponding minimum cell rate (MCRs)"*. It is known in the art weighted max-min bandwidth allocation that "weight" is "rate" and vice versa. Thus, Hou discloses the claimed limitation in a manner as recited.

Hou does not teach "increasing the amount of bandwidth to all the remaining data flows passing through the network device in proportion to the weights of the remaining data flow".

There is no doubt that the Hou generalized max-min rate allocation is implement at a switching device (*Fig. 2; element 201, 202 or 203*) (*corresponding to "network device" or "network"* as argued) to determine maximum rate (corresponding to "bandwidth" as argued) among all sessions (corresponding to "data flows" as argued). As discussed above, because of the term "weight" and "rate" use interchangeably, the Hou's GMM process is known in the art as weighted (rate) maximum/minimum process. Moreover, at col. 5, lines 16-17, Hou discloses each session s is assigned a rate (weigh) equivalent to its corresponding minimum cell rate (MCRs) and sessions are sorted in order of increasing MCR to produce a list of session (corresponding to "a delay"). In addition, at col. 5, lines 34-53, the data flow (session) is assigned rate until its capacity is reached or saturated. A saturated link is removed from the list and the

process is repeated for the remaining flows in the list. Thus, contradistinction to the Applicants' argument, Hou discloses the claimed limitations in a manner as recited.

As for the argument of "Hou reference is not understood to disclose or to suggest "allocating bandwidth in the network device to uncommitted data traffic flows based on the amount of bandwidth that was used during the previous data traffic flow transfer" (Remarks, page 42, second paragraph). Examiner's response is Hou does disclose such limitation. Because of the Hou's GMM (generalized max-min) bandwidth or rate allocation process is an iterative process. In accordance with Fig. 3, step 301, the process assigns a weight (rate) to each session (data flow). As the process progresses to step 304, it increases rate of sessions based on A, B and C conditions. Condition C relates to the remaining link bandwidth before saturation. As soon as link rate of a session is saturated, that link is removed from the process and the process is repeated for the remaining link. Because of the remaining link bandwidth (without the saturated link from previous iteration) is assigned to the remaining link in the list, the Hou's process does indeed read on the claimed limitation in a manner as recited.

Examiner would strongly refer the Applicants to references accompanied this Office Action to better understand the process of "generic weight-based" or "weighted max-min" bandwidth allocation in an ATM network.

Examiner believes an earnest attempt has been made in addressing all of the Applicants' arguments. Due to the amendment fails to place the application in a favorable condition for allowance and the arguments are not persuasive, the rejection is maintained.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. However, Examiner reserves the right to applied the below references in the next Office Action.

Henrion et al (USP 6,469,982).

Tzeng et al, A Generic Weight-Based Network Bandwidth Sharing Policy for ATM ABR Service, IEEE, pages 1492-1499, 1998.

Panwar et al, Weighted Max-Min Fair Rate Allocation for Available Bit Rate Service, IEEE, pages 492-497.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FRANK DUONG
PRIMARY EXAMINER

May 29, 2005